

## CHAPTER ELEVEN

### CONTRIBUTIONS OF EPISTEMOLOGY IN EDUCATION TO SPECIAL NEEDS EDUCATION (SNE)

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#### **Introduction**

As an applied discipline, Philosophy of Education has made tremendous contribution across philosophical spheres. However, most of the contributions of Philosophy of education are, seldom talked about as it relates to the field of educational psychology or education at large and special needs education in particular. Many do not see so much of philosophical impact of philosophy of education on special needs education. For instance, there have been significant academic activities around subjects such as philosophy of education and morality, ethics, aesthetics, and so on, but philosophy of education and some fields of studies whose method of enquiry is scientific are only gaining prominence in recent years.

From the word “go” psychology has been somewhat integrated with philosophy. There is no field of human endeavour that does not lend itself to philosophical investigation. One of the major functions of philosophy of education is to critically and systematically examine claims in educational practices. Another major function of Philosophy of Education is the application of logical techniques in order to achieve clarity. Every claim both in concept and practice always come under the X-ray of philosophical analysis to ensure their positions are rational and practicable. This includes educational psychology in general and special needs education in particular.

Before the emergence of experimental psychology, psychological approach was tied traditionally to rationalization. As a result of the influence of scientific revolution, there arose the need to evolve a science of human psychology that will combine the physical and biological sciences in its operation. Cardinal proponent of this move was Johann Friedrich (1776-1841). Its aim was according to Okafor (2006) to make psychology an independent science and sever it from all forms of metaphysics. However, in Philosophy one can still talk of Rational Psychology as a sub branch of Metaphysics (Osaat, 2010). It implies Friedrich did not succeed in completely divorcing psychology from philosophical psychology, educational psychologists after him made tremendous impact in revolutionizing the process of psychological investigation. They succeeded in introducing scientific method of data collection, analysis and the use of experimentation in the search for psychological discovery. Despite the seeming success in the introduction of

empirical method of investigation in the field of psychology of education, the separation was not total. It is in the light of this that Bigge in Okafor (2006) states that Science however pure it appears to be will not be without some philosophical implications. Even the strictest scientific research is guided by some ethics and morality. This is not to say that philosophy does not use scientific mode of investigation at all, there is a kind of relationship between them. Fundamentally, psychology studies human behaviour and there is no way one will study the behaviour of the human that have not been studied. Philosophy provides knowledge about man. One can then say, that philosophy, whether of education or a branch of it, epistemology as well as Epistemology in Education is inseparably connected with psychology in general or an aspect of it- Special Needs Education.

Generally, epistemology is a branch of philosophy that concern itself with the study of knowledge and how it is gained. It examines what is said to be known and how it is known. It is this branch of philosophy according to Thaxton (n.d) that explains how human minds relate to reality and it also reveals whether or not the relationships are valid. Epistemology helps to dissect truth from falsehood. This presupposes that knowledge can either be true or false, valid or invalid. It is epistemology that gives us the confidence and reasons to believe our own thoughts and actions. .

Epistemology in Education came about as a result of the increasing application of epistemological ideas to other fields of study. More than any other fields of study where epistemology is useful, education is more connected. According to Gelpi (2021), education is defined as the transmission of values and accumulated knowledge of a society. Whether an education is formal, non-formal or informal, they all have much to do with knowledge, which is central to epistemology. Many countries have continually improved their education from merely producing people with mere knowledge to a more productive knowledge that can contribute to the development of their society and the world at large. Encyclopedia.com (2022) states that in as much as it is important to educate learners of the specific knowledge that scholars in different fields have constructed, it is even perhaps more important to teach the exact skills and process that experts deployed which led to their discovery or construction of knowledge. The era when high academic grades are factors that determines one's job placement and the amount of money that they earn has long gone. Employers of labour started discovering that there is no co-relation between the high grades and job performance. Employers were spending so much time and money to train graduates in order for them to acquire the needed skills to enable them perform the job for which they have spent years studying at the universities or colleges. This is so because even though subject matter and the required information were imparted, the skills and process necessary for acquiring the knowledge and information were not taught.

Epistemology helps curriculum developers, teachers and instructors to teach and impart knowledge that is valuable and useful both to the learner and the

society in which he lives. With the speedy pace of technological advancement, 'head knowledge' and mere information become obsolete and forgotten faster than ever. In recent years, there is increased emphasis on the teaching and learning of process skills such as critical thinking, creative thinking, writing, oral presentation/communication, data collection and analysis, etc. in schools. It is in this light that epistemology becomes so relevant to education. The application of epistemological questions in education is what has led to the various improvements in education in general and Special in particular..

There are no two learners that are same in all sense of human or learning ability. Some sought of disabilities ranging from mild to severe is responsible for the individual differences we encounter in our classrooms. Special Needs Education is that kind of education that is designed for learners with disabilities with the aim of helping them acquire necessary skills and knowledge to help them live to their full potentials. Most countries in the world, including developing countries like Nigeria has stated that every child have the right to education regardless of their condition. The Federal Ministry of Education (2015) states that making appropriate education available to learners is a sure way of equalizing educational opportunity for all as prescribed by UNESCO. This idea rests on the philosophy of Nigerian education which states that the purpose of Special Needs Education among other things is to identify the dignity of and worth of the human person and to utilize the residual strength to overcome weakness and to ensure full inclusion of the individuals into the community. The document supports inclusive education depending on the severity of the disability. According to Hayes and Jannae (2017), the purpose of educating children with disability is not different from the purpose for which others without disabilities are educated. It is fundamental to help maximize their potentials and to actively live and contribute to the community in which they live in. In the pages ahead, we are going to examine the contributions of epistemology in education to the realization of Special Needs Education.

This chapter would explain some contributions of epistemology in education to the development and practice of Special Needs Education. This is possible because epistemology as a theory of knowledge has everything to do with the mind and as one of most sciences that studies how the mind works is psychology of which Special Needs Education is cardinal aspect. According to Puddifoot (2012), the same argument that favours the use of psychology in Epistemology also fits the use of neuro-science. Both disciplines provide the understanding of how the mind works. This study shall consider the Contributions of Epistemology in Education to Special Needs Education, Challenges, Implications, Conclusion and Suggestions.

## **Contributions of Epistemology in Education to Special Needs Education**

In ways that are not very pronounced in most education books by most scholars, Epistemology in education has greatly contributed to the understanding and practice of Special Needs Education. As a theory of knowledge, epistemology has shaped how learners with some challenges and disabilities learn differently and effectively from the other normal learners in a mainstream learning environment. Through the application of philosophical principles in Epistemology in education, better means of addressing the needs of special learners are brought to the fore. Epistemologists of education are analyzing aims of education and the proper application to the process of learning and gaining appropriate knowledge.

The most important aim of education is primarily the promotion of knowledge, which is also known from the epistemological point as true belief. As already stated, epistemology as a theory of knowledge cuts across all fields of human studies. Goldman in Siegel (2004) states that just like in the field of science, epistemology seeks to promote knowledge, but not exactly in the same way it does in education. While science seeks knowledge that is new for mankind, education seeks knowledge that is novel for individual learners. This is the core task of special-education to take up individual learners regardless of their condition and help them gain the necessary knowledge that will help them succeed in any situation in life. In what ways therefore does epistemology in education help to shape Special Needs Education? We shall address or answer this question by examining some ways Epistemology in Education can be of help to Special Needs Education.

### **1. Epistemology in Education Helps Teachers and Learners Understand Learning Process**

Research in human personal learning to an extent began from philosophy and shifted to psychology and others. The foundation of psychology as it relates to how learning takes place was laid by epistemology in education. Labbas (2013) states that the shift started with Piaget's work, which marked a new way in which epistemology is studied. Epistemology itself is primarily of philosophical origin. This in itself is a great contribution to Special Needs Education. Since epistemology in education is psychological and because it focuses on the cognitive and the metacognitive activities learners go through to acquire knowledge, and special education is also in search of such knowledge for learners who are to co-exist in the same space. In this vein, epistemology in education becomes very instrumental in the actualization of the goals of Special Needs Education. Suffice to clarify here that the goal of education is the same, whether the recipients of the knowledge are physically, mentally and psychologically challenged or not. The only difference is the mode or method through which the knowledge is passed to the learners. On the Individual basis epistemology helps learners discover their own process of learning. If as a teacher, in an attempt to help a learner gain certain knowledge, the understanding of personal epistemology will help the educational facilitator

differentiate his teaching in order to really help each of the learners achieve the objectives of the lesson. Therefore, epistemology in education provides this assistance both to individual learners and as groups engaging in academic activities.

## **2. Epistemology in Education and Inclusive Education**

Most scholars agree that in the process of educating people with special needs, there should be no special setting in terms of classroom where these learners are separated, kept and taught exclusively. The only special requirement is the acquisitions of skills by educators to enable them meet the needs of these learners in an inclusive setting. Engagement of learners with special needs in an inclusive educational settings is founded on the philosophy of equality, equity, shared humanity, participation, the worth and dignity of every human, regardless of their condition. Inclusiveness is built on the philosophic belief that all children can learn, reach and maximize their full potential if they are given the opportunity, needed motivation, effective delivery of instruction and appropriate resources. Carlson (2015) believes that students can learn from each other, especially when students with disability and those without it come together. Indeed, from observation, when learners of different abilities are grouped in a classroom to learn, those with the least ability are consciously or unconsciously influenced by the high flyers.

In recent times, it has been observed that high school students in some academic settings are increasingly developing empathy for each other. They are helping each other overcome their challenges- whether physical, academic or emotional challenges. In the same vein, when students with disabilities are kept in a restricted environment, school or classroom, they remain longer in their disability than when they are in an inclusive classroom. In a restricted setting, they are like the proverbial “blind leading the blind”. In an inclusive educational setting, there is an unspoken influence, where the students with special needs want to be like the normal students. They strive consistently to live above their disabilities. Previous researchers have also linked the success of any inclusive education to teachers’ attitude and skills. Silverman (2002) states that three major factors are necessary to promote positive attitude among teachers towards inclusion:

(i) **Belief that students with disability can indeed learn.** This is so important because the first step towards inclusiveness is the conviction that these set of learners have the ability to learn. Some research have shown that teacher in many schools have resisted the idea bringing together learners with special needs to learn together with other learners. This is based on the belief that they cannot learn in a mainstream school or class. The fear that they will slow down learning process for others and waste teachers’ time during classes is being doused with the introduction of Epistemology of and in education in teacher training institutions. More so, the use of differentiated teaching methods have been found to be effective

in an inclusive classroom; where different methods or teaching strategies are employed in a class in order to meet the various needs of students.

(ii) **Having self-efficacy to effectively teach learners with disabilities in inclusive environment.** Without the belief in the ability that teachers indeed can make learning happen in an inclusive setting, it may never occur. If they think the task of educating students with special needs is not possible in inclusive setting, it becomes unrealizable.

(iii) **Accepting that general and special teachers are mutually complementary in educating all learners.** In inclusive setting, there should be no need for segregation in terms of who is a special needs teacher or who a normal teacher is. If they do exist by specialization, they should play a supportive role as partners whose common goal is to help all learners, regardless of their peculiarity reach their potentials. However, in teacher education programmes, it is now compulsory that teacher trainee take a course not only in general psychology of education, but also in Special Needs education. This helps all teachers gain the basic skills to help all learners in an inclusive / exclusive classroom.

### **3. Epistemology in Education Cures Skepticism**

Skepticism if not well dealt with can spread so fast leading to a belief that some things are impossible or do not exist. One of the major factors militating against the success of special Needs Education is Skepticism. Many doubt the possibility of students with special needs to ever learn. Parents, teachers and care givers do not see much possibility in learners with challenges to be educated. This Skepticism is regrettably passed unto the learners themselves making them doubt the ability to ever achieving anything in their life time. Since Epistemology explains the process by which knowledge is gained, it clears the doubt of both learners and others about knowledge. Rene Descartes overcame his Skepticism about knowledge through Epistemology. He doubted everything about reality except his own existence. According to Blakeley (2021), Descartes, considering that his sensory experiences could always be doubted, he developed his epistemological framework from the perspective that since he could not doubt his own existence, he could trust his own ability to have rational thought. In the same way, Epistemology can help learners of any condition believe in his or her ability to know, act or perform certain tasks when given the necessary support.

### **4. Discovery of Learning Difficulties and Solutions**

As a theory of knowledge, Epistemology helps to discover learning difficulties in any given field of knowledge or subject. Epistemology creates standard of what real knowledge should be and the absence of it will be obvious to all actors in the business of teaching and learning. When a learner faces difficulty in acquiring the knowledge and skills appropriate to his or her level, age and exposure, then it shows that the learner has some learning challenges. These challenges may be as a result of several reasons which include but not limited to,

mental disability, cognitive disorder or a faulty process of acquiring knowledge. According to Victor, Costa and Bonito (2021), the concept of learning has been viewed as a process whereby learners gain appropriate knowledge under the teacher as the facilitator. The teacher should help students perceive consciously and help them to think and act in the direction of the knowledge being transmitted. For learning to have effectively taken place, learners should be able to apply their knowledge in solving problem in new situations. This is first preceded by the process of knowing, analyzing, comparing, generalizing, synthesizing and abstracting. In acquiring scientific knowledge and attaining dexterity, it is imperative for students to undertake as many laboratory practices as possible.

Discovering learning difficulties and the cause of such challenges give sufficient reasons to believe that they are solvable. It is in this vein that Kelly (2001) states that learning strategy resolves learning difficulties. He further stated that solvability is the cardinal task addressed by formal learning theory. Learning theories help educational facilitators construct appropriate learning strategies which will lead to success.

### **5. Enhance Rationality and Critical Thinking**

According to Encyclopedia.com (n.d), most great philosophers of education believe that students' rationality or critical thinking is the basic epistemic aim of education. Regardless of who is getting this education, whether those with special needs or those without difficulties, the goals are the same. All educational efforts therefore should be channeled towards the development of critical thinking skills. To this effect, activities around education are epistemically successful only to the extent that they enable learners gain the ability to evaluate reasons to believe to an extent or completely, and to enable learners' disposition to evaluate and also believe accordingly. Greene and Yu (2015) stated that epistemic dispositions and beliefs can activate or deactivate the epistemic cognition skills required for critical thinking. This is because the skills are based on specific discipline. This is from the notion that no one can be so versatile in all fields of Knowledge. Science, History, Mathematics all have basic disposition which learners must have in order to acquire the skill set for critical thinking.

### **6. Setting Parameter to Evaluate Human Power of Thinking**

Epistemology in Education is to a large extent necessarily involves in getting the truth or true knowledge. For this reason it examines the relationship between act of knowing and what is known. This expectation leads to an average intelligent learners both normal and special needs students to be guided with power of thinking-creatively, experience and scientific observation that resulted in Inductive (apriori) method in rationalism and Deductive (aposterioristic) method in empiricism. The special needs students have full hope of growing to any level of intellectual, economic, socio-political and moral development (Osaat, 2010). For a true knowledge to be obtained the child must be trained to have a developed mind

that would help contribute greatly to other aspects of development. The development of mind is vital to human development of any kind. Epistemology helps the learners or special needs students develop critical minds or parameter for evaluation. He or she can evaluate his/her actions or reactions and ability to perform.

### **7. Promotion of Functionality of Special Needs Education Graduates**

Epistemology in Education promotes functionality of recipients of special needs education and hence helps them to fulfill the aim (s) of education in general. For any education system to be useful it must be functional and its recipients become useful or self-reliant in any sense of it. National policy on education, according to Federal Republic of Nigeria (FRN; 2013) stipulates that education should realize some goals such as: Education maximizes the creative potentials and skills of the individual for self-fulfillment and the general development of the society; and Education is to be qualitative, comprehensive, functional and relevant to the needs of the society. Epistemology in education helps the realization of such goals.

### **Challenges of Employing epistemology in Special Needs Education**

There are challenges to overcome for effective application of Epistemology in education to promote Special Needs Education. Very importantly, among the challenges are the production/ training of professionals who must be proficient and skilful to address the challenges. Professional teachers who can handle special needs learners to have maximum benefits from epistemology are not common comeby. So they must be trained and motivated to put in their best. Closely related to the stated challenges is the inadequate teaching staff to professionally identify and follow-up the special needs learners at all levels of education.

Again, are the challenges of provision of infrastructure, facilities and funding of special needs education. For the system to produce citizens that would measure up and contribute to the development of the society there must be adequate provisions of all that are required for the teaching and learning of the special needs education. The lack of comprehensive or lack of political will to implement the little guiding principles of special needs education. The inadequate provision of funds, professional teachers, lack of facilities/infrastructure and poor implementation of policy among others constitute formidable challenges to the place of Epistemology in education to Special Needs Education.

### **Implications of the Contributions of Epistemology in Education (EIE) for Special Needs Education (SNE)**

Epistemology in education focuses on functionality by considering critical thinking and creativity through creative thinking and creative teaching (Osaat, 2019). A good teacher applies a creative teaching approach or method to make education recipients creative and functional. Critical and creative thinkers are

transformed at the end of their studies and they in turn become transformers and self-reliant. The special needs education needs this for its recipients. Epistemology in education would contribute a lot to special needs education especially making special needs scholars creative, functional and self-reliant in any educational system. In other hands, this education system must be comprehensive, qualitative, functional and self-reliant.

By implication, epistemology practically provides open-mindedness in the recipients of SNE. It brightens the learners' outlooks and promotes spirit of scholarship in the recipients of SNE. Also, it inspires, motivates and creates strong passion and aspiration for further learning and research. A proper application of epistemology in education into the special needs education recipients or graduates would not only make them employable but also great assets in Nigeria and beyond.

### **Conclusion**

The contributions of Epistemology in Education to Special Needs Education are enormous. From the foregoing we have seen the impacts on education in general and on special education in particular. As a theory of Knowledge which is fundamental to any true learning, Epistemology has shaped our conception of what Knowledge truly is, how it can be acquired, the basic foundation on which Knowledge can be effectively built. Epistemology has impacted the way in which Special Needs Education is practiced. Curriculum developers, teachers and instructors are equipped with the needed skills for the most important and accurate curriculum content, how best to impart the Knowledge and what specific Knowledge, and the best teaching strategy that will ensure success. One of the biggest problems in our world today is that there are so much people who cannot really think critically. If more is done to enrich teacher education program with epistemological content, they will be equipped to teach learners how to think critically. If provided with necessary instructions and support, even young learners can think critically.

Epistemology in Education helps the production of teachers that can coordinate teaching and belief systems, curriculum contents and the consideration of students' levels in teaching and learning. It helps the teachers embrace inductive and deductive teaching methods/approaches in science, arts and social science. The learners in general and the special needs students in particular are guided with criteria for effective assessment of issues and challenges in their lives and the society. In this case, they can effectively contribute like others to the building of the society. A Epistemology in education helps the production of teachers that coordinate teaching and belief systems, curriculum contents and the students level and make the teachers embrace instructive and deductive teachings methods/approaches in science, social science and methods in arts. The learners in general and the special needs students in particular are guided with criteria for effective assessment of issues and challenges in their lives and the society. In this case, they can effectively contribute like others to the building of the society.

## Suggestions

A casual look into the educational activities and outcomes in Nigeria shows that the required Knowledge for the transformation of the country from a third world developing country into the future that is anticipated is not being inculcated yet. Countries that now enjoy technological, economic and infrastructural development have long moved from the theoretical Knowledge development to a practical Knowledge. For things to change for the better, the following suggestions will be worth considering: (1) Promotion of inclusive educational setting in all schools. (2) Legislation for inclusive education and the rights of people living with disabilities.(3)Teacher education programme should have epistemology as a cardinal course. (4) It is imperative for educators to re-evaluate their curricula as to know if their design and implementation have what it takes to help learners acquire knowledge and knowing that meets the need of learners and the society they live in.

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